Departi	ment of Health and Human	Services	LEAVE BLANK—FOR PHS USE ONLY.						
•	Public Health Services		Type Acti	Numbe	Number				
G	Frant Application	on	Review Group	Forme	rly				
	ed character length restricti		Council/Board (Mont	h, Year)	Date R	Received			
TITLE OF PROJECT	(Do not exceed 81 characte	ers, including spaces and p	unctuation.)						
(If "Yes," state numbe	•	PLICATIONS OR PROGRA	M ANNOUNCEMENT	OR SOLI	CITATION	NO YES			
Number:	Title:		1						
	GATOR/PROGRAM DIREC	TOR	New Investigator	No	Yes				
3a. NAME (Last, first, mi	ddle)		3b. DEGREE(S)		3h. eRA	Commons User Name			
3c. POSITION TITLE			3d. MAILING ADDRE	SS (Stree	et, city, state,	zip code)			
3e. DEPARTMENT, SER	VICE, LABORATORY, OR	EQUIVALENT							
3f. MAJOR SUBDIVISIO	N								
3g. TELEPHONE AND FA	AX (Area code, number an	d extension)	E-MAIL ADDRESS:						
TEL:	FAX:								
4. HUMAN SUBJECTS RESEARCH	4b. Human Subjects Assurance	e No.	5. VERTEBRATE ANIMALS No Yes						
No Yes		NIH-defined Phase III cal Trial No Yes	5a. If "Yes," IACUC app Date	oroval	5b. Animal we	lfare assurance no.			
4a. Research Exempt No Yes	If "Yes," Exemption No.			_					
DATES OF PROPOS SUPPORT (month, or	ED PERIOD OF lay, year—MM/DD/YY)	 COSTS REQUESTED BUDGET PERIOD 	8. COSTS REQUESTED FOR PROPO PERIOD OF SUPPORT						
	Through	7a. Direct Costs (\$)	7b. Total Costs (\$) 8a. Direct Costs (\$) 8b. Total Costs						
9. APPLICANT ORGAN	IZATION		10. TYPE OF ORGA	NIZATION					
Name			Public: →	Federal	Sta	te Local			
Address			Private: →	Private I	Vonprofit				
			For-profit: →	General	Small B	usiness			
			Woman-owned	Social	ly and Econo	mically Disadvantaged			
			11. ENTITY IDENTIFICATION NUMBER						
			DUNS NO. Cong. District						
12. ADMINISTRATIVE O Name	FFICIAL TO BE NOTIFIED	IF AWARD IS MADE	13. OFFICIAL SIGNING FOR APPLICANT ORGANIZATION Name						
Title			Title						
Address			Address						
Tel:	FAX:		Tel: FAX:						
E-Mail:			E-Mail:						
statements herein are true, c aware that any false, fictitious criminal, civil, or administrativ	TOR/PROGRAM DIRECTOR A omplete and accurate to the be s, or fraudulent statements or cl re penalties. I agree to accept of provide the required progress r	st of my knowledge. I am aims may subject me to responsibility for the scientific	SIGNATURE OF PI/I (In ink. "Per" signatur			DATE			
15. APPLICANT ORGANIZA	ATION CERTIFICATION AND A		SIGNATURE OF OF			DATE			
accept the obligation to comp is awarded as a result of this	 e, complete and accurate to the oly with Public Health Services the application. I am aware that are object me to criminal, civil, or adread 	erms and conditions if a grant ny false, fictitious, or fraudulent	(In ink. "Per" signatu	re not acce	ptable.)				

Principal investigator/Program Director (Last, First, Middle):
DESCRIPTION: See instructions. State the application's broad, long-term objectives and specific aims, making reference to the health relatedness of the project (i.e., relevance to the mission of the agency). Describe concisely the research design and methods for achieving these goals. Describe the rationale and techniques you will use to pursue these goals.
In addition , in two or three sentences, describe in plain, lay language the relevance of this research to public health. If the application is funded, this description, as is, will become public information. Therefore, do not include proprietary/confidential information. DO NOT EXCEED THE SPACE PROVIDED.
PERFORMANCE SITE(S) (organization, city, state)

KEY PERSONNEL. See instructions. Use continuation pages as needed to provide the required information in the format shown below. Start with Principal Investigator. List all other key personnel in alphabetical order, last name first. Role on Project Name eRA Commons User Name Organization OTHER SIGNIFICANT CONTRIBUTORS Name Organization Role on Project **Human Embryonic Stem Cells** No Yes If the proposed project involves human embryonic stem cells, list below the registration number of the specific cell line(s) from the following list: http://stemcells.nih.gov/registry/index.asp. Use continuation pages as needed. If a specific line cannot be referenced at this time, include a statement that one from the Registry will be used. **Cell Line** Disclosure Permission Statement. Applicable to SBIR/STTR Only. See SBIR/STTR instructions. Yes No

The name of the principal investigator/program director must be provided at the top of each printed page and each continuation page.

RESEARCH GRANT TABLE OF CONTENTS

	Page Numbers									
Face Page	<u> </u>									
Description, Performance Sites, Key Personnel, Other Significant Contributed Embryonic Stem Cells										
Table of Contents										
Detailed Budget for Initial Budget Period (or Modular Budget)										
Budget for Entire Proposed Period of Support (not applicable with Modular Budget)										
Budgets Pertaining to Consortium/Contractual Arrangements (not applicable										
Biographical Sketch – Principal Investigator/Program Director (Not to exceed to the control of t	· • · · · · · · · · · · · · · · · · · ·									
Other Biographical Sketches (Not to exceed four pages for each – See instruc										
Resources	······									
December 1915										
Research Plan	<u> </u>									
Introduction to Revised Application (Not to exceed 3 pages; SBIR/STTR Phase I not to exceed 1 pages)	re)									
Introduction to Supplemental Application (Not to exceed one page)	• •									
A. Specific Aims	· · · · · · · · · · · · · · · · · · ·									
B. Background and Significance										
C. Preliminary Studies/Progress Report/ (Items A-D: not to exce										
Phase I Progress Report (SBIR/STTR Phase II ONLY) * SBIR/STTR Phase I: Items										
D. Research Design and Methods	, 3									
E. Human Subjects Research										
Protection of Human Subjects (Required if Item 4 on the Face Page is marked "Yes")										
Data and Safety Monitoring Plan (Required if Item 4 on the Face Page is marked "Yes" or III clinical trial is proposed)	· 									
Inclusion of Women and Minorities (Required if Item 4 on the Face Page is marked "Yes" a	nd is Clinical Research)									
Targeted/Planned Enrollment Table (for new and continuing clinical research studies) .										
Inclusion of Children (Required if Item 4 on the Face Page is marked "Yes")										
F. Vertebrate Animals										
G. Literature Cited										
H. Consortium/Contractual Arrangements										
I. Resource Sharing										
J. Letters of Support (e.g., Consultants)										
Commercialization Plan (SBIR/STTR Phase II and Fast-Track ONLY)										
Checklist										
Appendix (Five collated sets. No page numbering necessary for Appendix.)	Check if Appendix is									
Appendices NOT PERMITTED for Phase I SBIR/STTR unless specifically solicited	Included									
Number of publications and manuscripts accepted for publication (not to exceed 10)										
Other items (list):										

DETAILED	BUDGET FOR INI DIRECT COST		GET PEF	RIOD	FROM	ТН	HROUGH
PERSONNEL (Applicant or	rganization only)		%		DOLLAR AMO	OUNT REQUES	STED (omit cents)
NAME	ROLE ON PROJECT	TYPE APPT. (months)	EFFORT ON PROJ.	INST. BASE SALARY	SALARY REQUESTED	FRINGE BENEFIT	
	Principal Investigator	(**************************************					
	SUBTOTAL	s					
CONSULTANT COSTS							
EQUIPMENT (Itemize)							
SUPPLIES (Itemize by cat	egory)						
TRAVEL							
PATIENT CARE COSTS	INPATIENT						
ALTERATIONS AND RENG	OUTPATIENT OVATIONS (Itemize by ca	tegory)					
OTHER EXPENSES (Item	nize by category)						
CONSORTIUM/CONTRAC	TUAL COSTS				DIR	ECT COSTS	
SUBTOTAL DIRECT	COSTS FOR INITIAL	BUDGET	PERIOD (Item 7a, Face F	Page)		\$
CONSORTIUM/CONTRAC	TUAL COSTS			FACILITIES A	ND ADMINISTRAT	TIVE COSTS	
TOTAL DIRECT COS	STS FOR INITIAL BU	DGET PER	IOD				\$
SBIR/STTR Only: FE	E REQUESTED						

BUDGET FOR ENTIRE PROPOSED PROJECT PERIOD DIRECT COSTS ONLY

BUDGET CATEGORY TOTALS		INITIAL BUDGET PERIOD	ADD	ITIONAL YEARS OF S	UPPORT REQUESTE	D
		(from Form Page 4)	2nd	3rd	4th	5th
	: Salary and fringe icant organization					
CONSULTAN	T COSTS					
EQUIPMENT						
SUPPLIES						
TRAVEL						
PATIENT	INPATIENT					
CARE COSTS	OUTPATIENT					
ALTERATIONS AND RENOVATIONS						
OTHER EXPE	NSES					
CONSORTIUM/ CONTRACTUAL DIRECT COSTS						
	DIRECT COSTS a, Face Page)					
CONSORTIUN CONTRACTU COSTS						
	ECT COSTS					
TOTAL DIRE	ECT COSTS FOR	ENTIRE PROPOSED F	PROJECT PERIOD	,	\$	3
SBIR/STTR Fee Reques	•					
Add Total Fee	amount to "Total dire	Requested for Entire Poct costs for entire proposed pots Requested for Proposed F	project period" above a	nd Total F&A/indirect cos	sts from Checklist	3

JUSTIFICATION. Follow the budget justification instructions exactly. Use continuation pages as needed.

RESOURCES

FACILITIES: Specify the facilities to be used for the conduct of the proposed research. Indicate the performance sites and describe capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Under "Other," identify support services such as machine shop, electronics shop, and specify the extent to which they will be available to the project. Use continuation pages if necessary.
Laboratory:
Clinical:
Animal:
Allina.
Computer:
Office:
Other:
Ouler.
MAJOR EQUIPMENT: List the most important equipment items already available for this project, noting the location and pertinent capabilities of each.

		CHECKLIST		
TYPE OF APPLICATION (Check	k all that apply.)			
NEW application. (This app	olication is being submitted to	the PHS for the first time.)		
REVISION of application nu				
(This application replaces a	a prior unfunded version of a	new, competing continuation, o	r supplemental application., INVENTIONS AND PAT	
COMPETING CONTINUAT	ION of grant number:			appl. and Phase II only)
(This application is to exter	nd a funded grant beyond its	current project period.)	— No	Previously reported
SUPPLEMENT to grant nur	nher		Yes. If "Yes,"	Not previously reported
· ·	itional funds to supplement a	currently funded grant.)	Yes. If Yes, —	Not previously reported
CHANGE of principal invest				
Name of former principal in	nvestigator/program director:			
	tion. Name of former institu	ution:		
FOREIGN application	Domestic Grant with forei	gn involvement List Country	y(ies)	
CDID Dhoop I CDID I	Dhood II. CDID Dhood I Cron	Involved:		DID Foot Trook
	Phase II: SBIR Phase I Gran	-		SIR Fast Track
STTR Phase I STTR 1. PROGRAM INCOME (See ii	Phase II: STTR Phase I Gra	nt No.	51	TR Fast Track
All applications must indicate whanticipated, use the format below	ether program income is anti		which grant support is requ	est. If program income is
Budget Period	Anticipated A	Amount	Source((s)
representative agrees to comply and/or certifications when applica assurances/certifications are pro compliance, where applicable, protein this page. •Human Subjects Research •Rescells •Research on Transplantation Minority Inclusion Policy •Inclusion	able. Descriptions of individua vided in Part III. If unable to rovide an explanation and pla search Using Human Embryo ion of Human Fetal Tissue	al (Form HHS 441 of or HHS 690) •Sex ace it after Discrimination (Form Research, Includity of Interest (except Women and Prohibited Research)	t Phase I SBIR/STTR) •Smo arch •Select Agents and To	Individuals (Form HHS 641 639-A or HHS 690) •Age •Recombinant DNA Research •Financial Conflict oke Free Workplace exins
3. FACILITIES AND ADMINSTR	<u>*</u>			attorr artiolpation.
DHHS Agreement dated:	, ,		No Facilities And Adminis	strative Costs Requested
DHHS Agreement being neg	notiated with			·
No DHHS Agreement, but ra	·		Regional Offic	c.
CALCULATION* (The entire gra		Chacklist will be reproduced an	Date	rs as confidential information)
, ,	,,	•	,	,
a. Initial budget period:	Amount of base \$	x Rate applied	= F&A costs	
b. 02 year	Amount of base \$	x Rate applied	= F&A costs	· ·
c. 03 year	Amount of base \$	x Rate applied	= F&A costs	s \$
d. 04 year	Amount of base \$	x Rate applied	= F&A costs	s \$
e. 05 year	Amount of base \$	x Rate applied	= F&A costs	s \$
			TOTAL F&A Costs	s \$
*Check appropriate box(es):	** Per 1 1	Parata and base	011 1 7	(- S.)
Salary and wages base		direct cost base	Other base (Exp	oiain)
Off-site, other special rate, Explanation (Attach separate sh	or more than one rate involve eet, if necessary.):	eα (<i>⊏xpiain)</i>		

Principal Investigator/Program Director (Last, First, Middle):

Place this form at the end of the signed original copy of the application. Do not duplicate.

PERSONAL DATA ON PRINCIPAL INVESTIGATOR/PROGRAM DIRECTOR

The Public Health Service has a continuing commitment to monitor the operation of its review and award processes to detect—and deal appropriately with—any instances of real or apparent inequities with respect to age, sex, race, or ethnicity of the proposed principal investigator/program director.

To provide the PHS with the information it needs for this important task, complete the form below and attach it to the signed original of the application after the Checklist. **Do not attach copies of this form to the duplicated copies of the application.**

Upon receipt of the application by the PHS, this form will be separated from the application. This form will **not** be duplicated, and it will **not** be a part of the review process. Data will be confidential, and will be maintained in Privacy Act record system 09-25-0036, "Grants: IMPAC (Grant/Contract Information)." The PHS requests the last four digits of the Social Security Number for accurate identification, referral, and review of applications and for management of PHS grant programs. Although the provision of this portion of the Social Security Number is voluntary, providing this information may improve both the accuracy and speed of processing the application. Please be aware that no individual will be denied any right, benefit, or privilege provided by law because of refusal to disclose this section of the Social Security Number. The PHS requests the last four digits of the Social Security Number under Sections 301(a) and 487 of the PHS Acts as amended (42 U.S.C 241a and U.S.C. 288). All analyses conducted on the date of birth, gender, race and/or ethnic origin data will report aggregate statistical findings only and will not identify individuals. If you decline to provide this information, it will in no way affect consideration of your application. Your cooperation will be appreciated.

DATE OF BIRTH (MM/DD/YY) SEX/GE	GENDER
SOCIAL SECURITY NUMBER XXX-XX- [last 4 digits only)	Female Male

ETHNICITY

1. Do you consider yourself to be Hispanic or Latino? (See definition below.) Select one.

Hispanic or Latino. A person of Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."

Hispanic or Latino

Not Hispanic or Latino

RACE

2. What race do you consider yourself to be? Select one or more of the following.

American Indian or Alaska Native. A person having origins in any of the original peoples of North, Central, **or** South America, and who maintains tribal affiliation or community attachment.

Asian. A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian **subcontinent**, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. (Note: Individuals from the Philippine Islands have been recorded as Pacific Islanders in previous data collection strategies.)

Black or African American. A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black" or African American."

Native Hawaiian or Other Pacific Islander. A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

White. A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Check here if you do not wish to provide some or all of the above information.

Targeted/Planned Enrollment Table

This report format should NOT be used for data collection from study participants.

Study Title:				
Total Planned Enrollment:				
TARGETED/PLANNED ENROL	 LMENT: Number of Subje	ects		
Ethnic Category	Females	Males	Total	
Hispanic or Latino				
Not Hispanic or Latino				
Ethnic Category: Total of All Subjects *				
Racial Categories				
American Indian/Alaska Native				
Asian				
Native Hawaiian or Other Pacific Islander				
Black or African American				
White				

Racial Categories: Total of All Subjects *

^{*} The "Ethnic Category: Total of All Subjects" must be equal to the "Racial Categories: Total of All Subjects."

Inclusion Enrollment Report

This report format should NOT be used for data collection from study participants.

Study Title:									
Total Enrollment: Protocol Number:									
Grant Number:									
	r of Subjects licity and Rac		Date (Cumulative	ə)					
,	Sex/Gender								
Ethnic Category	Females	Males	Unknown or Not Reported	Total					
Hispanic or Latino				**					
Not Hispanic or Latino									
Unknown (individuals not reporting ethnicity)									
Ethnic Category: Total of All Subjects*				*					
Racial Categories									
American Indian/Alaska Native									
Asian									
Native Hawaiian or Other Pacific Islander									
Black or African American									
White									
More Than One Race									
Unknown or Not Reported									
Racial Categories: Total of All Subjects*				*					
PART B. HISPANIC ENROLLMENT REPORT: Numb	er of Hispan	ics or Latino	s Enrolled to Da	te (Cumulative)					
Racial Categories	Females	Males	Unknown or Not Reported	Total					
American Indian or Alaska Native									
Asian									
Native Hawaiian or Other Pacific Islander									
Black or African American									
White									
More Than One Race									
Unknown or Not Reported									
Racial Categories: Total of Hispanics or Latinos**				**					
* Those totals must agree		•	<u>. </u>						

PHS 398/2590 (Rev. 09/04) Page ____ **Inclusion Enrollment Report Format Page**

^{**} These totals must agree.

STTR Research Institution Budget Additional Page Principal Investigator/Program Director: (Last, first, middle)

BUDGET		FROM		THROUGH				
NAME AND ADDRESS OF	RESEARCH INSTIT	UTION						
PERSONNEL				%		DOLLAR AMOUN	NT REQUES	TED (omit cents)
NAME	ROLE ON PROJECT TYPE APPT. ON BASE REQUESTED BENEFITS						TOTAL	
	Princi Invest							
	CURTO	TALC			→			•
CONSULTANT COSTS	SUBTO	TALS						\$
EQUIPMENT (Itemize)								
SUPPLIES (Itemize by car	tegory)							
TRAVEL								
PATIENT CARE COSTS	INPATIENT							
	OUTPATIENT							
ALTERATIONS AND REN	OVATIONS (Itemize	by catego	ory)					
OTHER EXPENSES (Item	nize by category)							
TOTAL DIRECT COSTS (a	also enter as Consort	ium/Conti	actual Costs	s on Budget Pa	ge of Small Bus	siness Concern)		\$
FACILITIES and ADMINIS (also enter as Consortium/				ness Concern)				\$
certification of resinstitution on this "Certificat business concern) on the FSTTR project will be conduperformed by the small bus and development"); (2) the business concern and the I less than 30 percent of the proportion of the proposed direction and control of the center, the duly authorized is free from organizational an STTR agency or private appropriate, to evaluate the Signature of Duly Authorized	tion of Research Insti- face Page of the applicated jointly by the smisiness concern and no proposed STTR projects are search institution in work will be performed project to be performed performance of the prepresentative of the conflicts of interests reaccess to STTR age a proposed project are	tution" pa ication, the all busine of less that ect is a co which no ed by the ed by ead roject. If the contractor elative to ncy person	ge, and by we small business concern a an 30 percent poperative rettless than 40 research insight party, the perceptage of the STTR proportion in the commance their	vay of the signal ness concern a and the research of the work with search or research or percent of the titution ("perform small business institution is a cederally funded togram; (5) did development of	rure of the officend the research institution in a leep erformed work will be pendence of researconcern will be contractor-oper research and not use privileg	pial signing for applic h institution certify io which not less than I by the research insopment effort to be of erformed by the smalarch and analytical was the the primary party the rated federally funded development center and information gains	cant organiza cointly that: (1) 40 percent of stitution ("coo conducted joi all business of york"); and (3 hat will exerce and research certifies, add ed through we 6) used outside	tion (small) the proposed f the work will be perative research ntly by the small concern and not) regardless of the ise management nd development ditionally, that it: (4) ork performed for
Signature of Duly Authorize	ou ivehieseillalive	Fillica	INAILIC		TIUC		Date 0	Signature

Mailing address for application

Use this label or a facsimile

All applications and other deliveries to the Center for Scientific Review must come either via courier delivery or via the United States Postal Service (USPS.) Applications delivered by individuals to the Center for Scientific Review will no longer be accepted.

Applications sent via the USPS EXPRESS or REGULAR MAIL should be sent to the following address:

CENTER FOR SCIENTIFIC REVIEW
NATIONAL INSTITUTES OF HEALTH
6701 ROCKLEDGE DRIVE
ROOM 1040 – MSC 7710
BETHESDA, MD 20892-7710

NOTE: All applications sent via a courier delivery service (non-USPS) should use this address, but CHANGE THE ZIP CODE TO 20817

The telephone number is 301-435-0715. C.O.D. applications will <u>not</u> be accepted.

For application in response to RFA

Use this label or a facsimile

IF THIS APPLICATION IS IN RESPONSE TO AN RFA, be sure to put the RFA number in line 2 of the application face page. In addition, after duplicating copies of the application, cut along the dotted line below and staple the RFA label to the bottom of the face page of the original and place the original on top of your entire package. Failure to use this RFA label could result in delayed processing of your application such that it may not reach the review committee on time for review. **Do not use** the label unless the application is in response to a specific RFA. Also, applicants responding to a specific RFA should be sure to follow all special mailing instructions published in the RFA.

R	F	Δ	N	O.	-					
				$oldsymbol{ol{ol{ol}}}}}}}}}}}}}}}$						



Mailing address for application

Use this label or a facsimile

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The telephone number is 301-435-0715. C.O.D. applications will not be accepted.

For application in response to SBIR/STTR

Use this label or a facsimile

IF THIS APPLICATION IS IN RESPONSE TO AN SBIR/STTR Solicitation, be sure to put the SBIR/STTR Solicitation number in line 2 of the application face page. In addition, after duplicating copies of the application, cut along the dotted line below and staple the appropriate SBIR or STTR label to the bottom of the face page of the original and place the original on top of your entire package. If this SBIR or STTR application is in response to an RFA, be sure to also include the RFA No. in the space provided below.

SBIR	
RFA No.	(if applicable)
STTR	
RFA No.	(if applicable)